**IN THE CLAIMS:**

1. (Currently amended) In a packet controller having an input, hash logic, pattern matching logic coupled to the hash logic, and control logic coupled to the hash logic and the pattern matching logic, a ~~A~~ method comprising:

receiving a message at an input of the packet controller;

providing the message to the hash logic which performs ~~performing~~ a hash function on the message to provide a hash result;

providing the message to the pattern matching logic which performs ~~performing~~ pattern matching on the message to provide a pattern match result, wherein performing pattern matching to provide the pattern match result comprises:

determining whether a pattern match exists within the received message based on pattern match data which indicates at least one pattern and pattern match control corresponding to the pattern match data, wherein the pattern match result indicates whether the pattern match exists, and wherein when the pattern match result indicates that the pattern match exists, the pattern match result further indicates whether the received message is one of accepted, rejected, and neither accepted nor rejected; and

the control logic selectively accepting the message based at least on the pattern match result.

2. (Original) The method of claim 1, wherein receiving the message comprises receiving at least a portion of a packet.

3. (Original) The method of claim 2, wherein the packet is further characterized as an Ethernet packet.

4. (Original) The method of claim 1, wherein the message comprises a destination address and wherein performing the hash function on the message comprises performing the hash function on the destination address.

5. (Original) The method of claim 1, wherein selectively accepting the message is based on the pattern match result and the hash result.

6. (Original) The method of claim 1, wherein the hash result indicates whether the hash function resulted in a hash hit.

7-8. (Cancel)

9. (Previously Presented) The method of claim 55, wherein the at least one pattern comprises a second predetermined pattern, and wherein the pattern match result indicates that the pattern match exists when the received message includes at least one of the first predetermined pattern and the second predetermined pattern.

10. (Previously Presented) The method of claim 9, wherein when the received message includes at least one of the first predetermined pattern and the second predetermined pattern, the pattern match result further indicates whether the message having the at least one of the first predetermined pattern and the second predetermined pattern is one of accepted, rejected, and neither accepted nor rejected.

11. (Previously Presented) The method of claim 55, wherein the at least one pattern comprises a second predetermined pattern, and wherein the pattern match result indicates that the pattern match exists when the received message includes the first predetermined pattern and ~~a~~ the second predetermined pattern.

12. (Previously Presented) The method of claim 11, wherein when the received message includes the first predetermined pattern and the second predetermined pattern, the pattern match result further indicates whether the message having the first predetermined pattern and the second predetermined pattern is one of accepted, rejected, and neither accepted nor rejected.

13. (Cancel)

14. (Previously Presented) The method of claim 1, wherein determining whether the pattern match exists is further based on a pattern match mask corresponding to the pattern match data.

15. (Previously Presented) The method of claim 1, wherein the pattern match control comprises a pattern match acceptance indicator which indicates whether to perform one of accepting, rejecting, or neither accepting nor rejecting the received message when the pattern match exists.

16. (Previously Presented) The method of claim 1, wherein the pattern match control comprises a match index which indicates an offset into the received message at which to perform pattern matching.

17. (Previously Presented) The method of claim 1, wherein the pattern match control comprises a continuous search enable which indicates a conditional acceptance of the received message when a pattern match exists.

18. (Previously Presented) The method of claim 1, wherein the pattern match control comprises a concatenation indicator and wherein determining whether the pattern match exists within the received message is based on at least two patterns indicated by the pattern match data.

19. (Previously Presented) The method of claim 1, wherein the pattern match control comprises an inverse pattern indicator, wherein the pattern match result indicates whether the received message includes a pattern indicated by the pattern match data when the inverse pattern indicator has a first value and indicates whether the received message does not include a pattern indicated by the pattern match data when the inverse pattern indicator has a second value.

20. (Original) The method of claim 1, wherein selectively accepting the message based at least on the pattern match result is performed without processor interruption.

21. (Original) The method of claim 1, wherein when the message is accepted, the method further comprises:

selecting a buffer descriptor queue (BDQ) based on the pattern match result, wherein the pattern match result indicates whether the received message includes a first pattern and provides pattern match attributes;

storing the message to memory according to the selected BDQ; and

selectively storing at least a portion of the accepted message to cache, wherein the portion of the accepted message is indicated by the pattern match attributes.

22. (previously presented) The method of claim 21, wherein the pattern match attributes indicate one of a plurality of BDQs corresponding to the first pattern, wherein the one of the plurality of BDQs corresponds to the selected BDQ.

23. (Original) The method of claim 21, wherein when the at least a portion of the accepted message is stored to cache, the pattern match attributes provide an extract index and an extract length to indicate the portion of the accepted message stored to cache.

24. (currently amended) In a packet controller having an input, hash logic, pattern matching logic coupled to the hash logic, and control logic coupled to the hash logic and the pattern matching logic, a ~~A~~ method, comprising:

receiving a message at an input of the packet controller;

providing the message to the hash logic which performs ~~performing~~ a hash function to determine whether a hash hit occurs;

providing the message to the pattern matching logic which determines ~~determining~~ whether a first pattern match corresponding to a first pattern is detected within the received message, wherein the first pattern is indicated by pattern match data and has a corresponding pattern match acceptance indicator;

when the first pattern match is detected, the control logic selectively accepting the received message when the pattern match acceptance indicator corresponding to the first pattern indicates acceptance of the received message and a hash hit occurs; and

when the first pattern match is detected, the pattern match acceptance indicator corresponding to the first pattern indicates rejection of the received message and a hash hit occurs, the control logic rejecting the received message.

25. (Original) The method of claim 24, wherein when the first pattern match is detected, selectively accepting the received message when the pattern match acceptance indicator corresponding to the first pattern indicates neither acceptance nor rejection of the received message and a hash hit occurs.

26. (Original) The method of claim 25, wherein when the pattern match acceptance indicator corresponding to the first pattern indicates neither acceptance nor rejection of the received message and a hash hit occurs, accepting the received message when the hash hit is a perfect hash hit.

27. (Original) The method of claim 25, wherein when the pattern match acceptance indicator corresponding to the first pattern indicates neither acceptance nor rejection of the received message and a hash hit occurs, accepting the received message when a promiscuous mode is indicated.

28. (Original) The method of claim 25, wherein when the pattern match acceptance indicator corresponding to the first pattern indicates neither acceptance nor rejection of the received message and a hash hit occurs, selectively accepting the received message based on a full address comparison.

29. (Original) The method of claim 24, wherein determining whether the first pattern match is detected is further based on a concatenate indicator.

30. (Original) The method of claim 29, wherein when the concatenate indicator has a first value, the first pattern match corresponds to the first pattern and a second pattern, the second pattern indicated by second pattern match data.

31. (Original) The method of claim 30, wherein when the concatenate indicator has a second value, the first pattern match corresponds to the first pattern and not the second pattern.

32. (Original) The method of claim 24, wherein when the first pattern match is detected, the received message is selectively accepted based on a continuous search indicator when the pattern match acceptance indicator corresponding to the first pattern indicates acceptance of the received message and the hash hit occurs.

33. (Original) The method of claim 32, wherein when the first pattern match is detected, the received message is accepted when:

the continuous search indicator indicates no continuous searching,

the pattern match acceptance indicator corresponding to the first pattern indicates acceptance of the received message, and

the hash hit occurs.

34. (Original) The method of claim 32, wherein when the first pattern match is detected, the received message is accepted when:

the continuous search indicator indicates continuous searching,

the pattern match acceptance indicator corresponding to the first pattern indicates acceptance of the received message,

the hash hit occurs, and

a second pattern match corresponding to a second pattern is detected, the second pattern having a corresponding pattern match acceptance indicator which does not indicate rejection of the received message.

35. (Original) The method of claim 34, wherein the pattern match acceptance indicator corresponding to the second pattern indicates one of accepting the received message and neither accepting nor rejecting the received message.

36. (Original) The method of claim 34, wherein the pattern match acceptance indicator corresponding to the second pattern indicates one of accepting the received message, neither

accepting nor rejecting the received message, and pattern matching is disabled for the second pattern.

37. (Original) The method of claim 32, wherein when the first pattern match is detected, the received message is not accepted when:

the continuous search indicator indicates continuous searching,

the pattern match acceptance indicator corresponding to the first pattern indicates acceptance of the received message,

the hash hit occurs, and

a second pattern match corresponding to a second pattern is detected, the second pattern having a corresponding pattern match acceptance indicator which indicates rejection of the received message.

38. (Original) The method of claim 24, wherein the first pattern has a corresponding inverse pattern indicator, and wherein when the inverse pattern indicator has a first value, the first pattern match is detected when the received message includes the first pattern.

39. (Original) The method of claim 38, wherein when the inverse pattern indicator has a second value, the first pattern match is detected when the received message does not include the first pattern.

40. (Original) The method of claim 24, wherein when the message is accepted, the method further comprises:

selecting a buffer descriptor queue (BDQ) based on pattern match attributes;

storing the message to memory according to the selected BDQ; and

selectively storing at least a portion of the accepted message to cache, wherein the portion of the accepted message is indicated by the pattern match attributes.

41. (Original) The method of claim 40, wherein the pattern match attributes indicate one of a plurality of BDQs corresponding to the first pattern, wherein the one of the plurality of BDQs corresponds to the selected BDQ.

42. (Original) The method of claim 40, wherein the pattern match attributes correspond to the first pattern.

43. (Original) The method of claim 40, wherein when the message is accepted, the method further comprises:

determining whether a second pattern match exists corresponding to a second pattern, wherein the pattern match attributes correspond to the second pattern.

44. (Original) The method of claim 40, wherein the pattern match attributes provide a pattern match extract indicator, and wherein the portion of the accepted message is stored to cache when the pattern match extract indicator indicates that extraction is enabled and the portion of the accepted message is not stored to cache when the pattern match extract indicator indicates that extraction is disabled.

45. (Original) The method of claim 44, wherein the pattern match attributes provide an extract index and an extract length to indicate the portion of the accepted message stored to cache.

46. (Original) The method of claim 40, wherein when the message is accepted, the method further comprises:

storing at least a portion of the selected BDQ to cache.

47. (Original) The method of claim 24 further comprising:

rejecting the received message when the first pattern match is not detected and a hash hit occurs.

48. (Original) A packet controller, comprising:

an input which receives a message;

hash logic which performs a hash function to determine whether a hash hit occurs within the received message;

pattern matching logic, coupled to the hash logic, which determines whether a first pattern match corresponding to a first pattern is detected within the received message, wherein the pattern match logic comprises at least one pattern match

register which stores pattern match data which indicates the first pattern and stores pattern match control which includes a pattern match acceptance indicator corresponding to the first pattern; and

control logic, coupled to the hash logic and the pattern matching logic, which selectively accepts the received message when the first pattern match is detected, the pattern match acceptance indicator corresponding to the first pattern indicates acceptance of the received message, and a hash hit occurs, and which rejects the received message when the first pattern match is not detected and a hash hit occurs.

49. (Original) The packet controller of claim 48, wherein the pattern match control further includes a concatenate indicator, and wherein the pattern matching logic uses the concatenate indicator to determine whether the first pattern match is detected.

50. (Original) The packet controller of claim 49, wherein when the concatenate indicator has a first value, the first pattern match corresponds to the first pattern and a second pattern, the second pattern indicated by second pattern match data stored within the at least one pattern match register.

51. (Original) The packet controller of claim 50, wherein when the concatenate indicator has a second value, the first pattern match corresponds to the first pattern and not the second pattern.

52. (Original) The packet controller of claim 48, wherein the pattern match control further includes a continuous search indicator, and wherein the control logic selectively accepts the received message based on the continuous search indicator when the first pattern match is detected, the pattern match acceptance indicator corresponding to the first pattern indicates acceptance of the received message, and the hash hit occurs.

53. (Original) The packet controller of claim 48, wherein the pattern match control further includes an inverse pattern indicator, and wherein when the inverse pattern indicator has a first value, the first pattern match is detected when the received message includes the first pattern.

54. (Original) The packet controller of claim 53, wherein when the inverse pattern indicator has a second value, the first pattern match is detected when the received message does not include the first pattern.

55. (Previously Presented) The method of claim 1, wherein the at least one pattern comprises a first predetermined pattern, and wherein the pattern match result indicates that the pattern match exists when the received message includes the first predetermined pattern.